

having a discharge orifice that varies in size with supply pressure of the liquid ... “

The phrase “the conduit” refers to a firefighting liquid conduit of “the nozzle.” The phrase “the nozzle” refers back to the “self metering automatic industrial scale fire fighting nozzle.”

Rejection of Claims as Anticipated by Lindsay

Claims 1 – 8, 10 – 12 and 13 stand rejected as by anticipated by Lindsay. Applicant respectfully traverses.

It is axiomatic that for anticipation every limitation in a claim must be found explicitly or inherently in the reference. The Examiner does not recite, and applicant does not find, where Lindsay discloses a nozzle conduit having a discharge orifice that varies in size with supply pressure of the liquid. To make the prima facie case of anticipation the Examiner must find every limitation of the rejected claim in the reference, explicitly or inherently. A prima facie case has not been made. Applicant submits that a prima facie case does not lie in this case based on reference Lindsay.

Discussion

Claim words are to be given their broadest reasonable interpretation as it would be understood by one of ordinary skill in the art in light of the specification and drawings.

A fire fighting liquid conduit of a nozzle is a structure of a nozzle designed to flow fire fighting liquid. A discharge orifice of that conduit of the nozzle discharges fire fighting liquid into the environment.

Consider page 4 lines 26- page 5 line 2.

“To continue to review the basics of a nozzle, a fire fighting nozzle defines a conduit for a fire fighting fluid that terminates in a discharge orifice. (The fire fighting fluid is usually water and while it may be treated and discussed as water herein, it should be understood that nozzle technology is applicable to various fire fighting fluids.) The conduit and discharge orifice structure are typically designed in combination to recover, to the extent practical, fire fighting fluid pressure available from the fluid source. Recovery of pressure affects range.”

The distance that the water (liquid) travels from the nozzle discharge orifice to the fire is understood by those in the art as comprising the nozzle's "range." See for instance page 2 line 28 – page 3 line 2:

“... the discharge pressure governs what is referred to as the ‘authority’ of the discharge stream and to a significant extent the stream’s range. A ‘constant discharge pressure’ nozzle comes closer to delivering a consistent stream at a fixed range than does a ‘fixed flow’ design and nozzle. A fixed range is more desirable for a fixed-location nozzle with a fixed target.”

The Examiner points to no portion in Lindsay that teaches variations in size of a discharge orifice of a nozzle, the discharge orifice being the discharge orifice of the liquid conduit of the fire fighting nozzle, much less to structure to automatically vary a variable opening associated with an additive passageway in response to variations and size of that discharge orifice of the nozzle.

In regard to the method claims, the Examiner does not show where Lindsay teaches an “automatic” (pressure regulating, at least in part) fire fighting nozzle, as that word is understood in the circumstances. Applicant does not find such teaching. As a consequence the Examiner does not (and applicant submits cannot) show where Lindsay discloses adjusting an occluding element in accordance with said varying conduit discharge orifice.

Claims 10, 11 and 12 have been amended herein to clarify what applicant thought (and continues to believe) was apparent in the prior wording. That is, the varying fire fighting liquid conduit discharge orifice is the varying discharge orifice of the fire fighting liquid conduit of the nozzle, as previously referenced in the claim. The article “the” could not have been properly used with the phrase “varying fire fighting liquid conduit discharge orifice” because, although the fire fighting liquid conduit of the nozzle had been previously referenced in the claim, its discharge orifice had not.

The Examiner further fails to show where Lindsay discloses adjusting an occluding element in an additive passageway in accordance with a varying discharge orifice of the fire fighting liquid conduit of the nozzle. In brief review of Lindsay, applicant finds none.

The Examiner asserts that Lindsay discloses a self-metering automatic fire fighting nozzle. Applicant respectfully traverses.

On page 2 applicant defines the terms “automatic” and “self-metering.” As defined in the specification, Lindsay does not disclose an “automatic” fire fighting nozzle. The Examiner points to no cite in Lindsay for such disclosure.

The Examiner’s recitation of a fire fighting liquid conduit 83 of Lindsay is not a fire fighting liquid conduit of the nozzle but rather is a fire fighting liquid conduit attached to Lindsay’s nozzle. The Examiner’s discharge orifice 17/23 is not a discharge orifice of a liquid conduit of a nozzle, but rather a discharge orifice of a proportioner located upstream of a nozzle, and connected to the nozzle by a line or a hose 83.

An automatic nozzle implies that the variations in size of the nozzle discharge orifice include a plurality of open sizes at which the nozzle affectively functions. Automatic nozzles are discussed on page 6 of the specification. Consider the quote:

“As a result of sensing and adjustment, a discharge orifice or gap is narrowed or widened in an automatic nozzle so that the sensed discharge pressure is approximately the selected discharge pressure. Again, as discussed above, when the discharge orifice or gap is narrowed, fluid flow rate through the nozzle is reduced. As the gap is widened, fluid flow rate through the nozzle is increased.” (Lines 13-17.)

A brief review of Lindsay suggests that Lindsay’s proportioner 11 does not disclose a water orifice that includes a plurality of open sizes at which the nozzle effectively functions. The orifice 17/23 in Lindsay’s proportioner 11 has an open position and a biased closed position. Lindsay does not teach pressure regulating structure in his proportioner 11.

In conclusion, applicant submits that the independent apparatus and method claims are clearly allowable over Lindsay. For that reason dependent claims 9 and 14 are also allowable without more.

Reconsideration and further examination is respectfully requested.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Sue Z. Shaper, Applicants’ Attorney at 713 550 5710 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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